

DECISION CACHE USING MULTI-KEY LOOKUP

ABSTRACT OF THE DISCLOSURE

5 One embodiment disclosed relates to a method of processing a data packet. The data packet is received at a network device. A determination is made as to whether a multiple-key decision cache is hit by the data packet. At least one cached action is applied if the decision cache is hit. The data packet is processed using software routines if the decision cache is missed. Another

10 embodiment disclosed relates to a network apparatus. The network apparatus includes a plurality of ports configured to receive data packets, and software routines are configured to process the data packets. Logic in the apparatus is configured to determine whether a multiple-key decision cache is hit by a data packet, to apply at least one cached action if the decision cache is hit, and to

15 process the data packet using the software routines if the decision cache is missed.